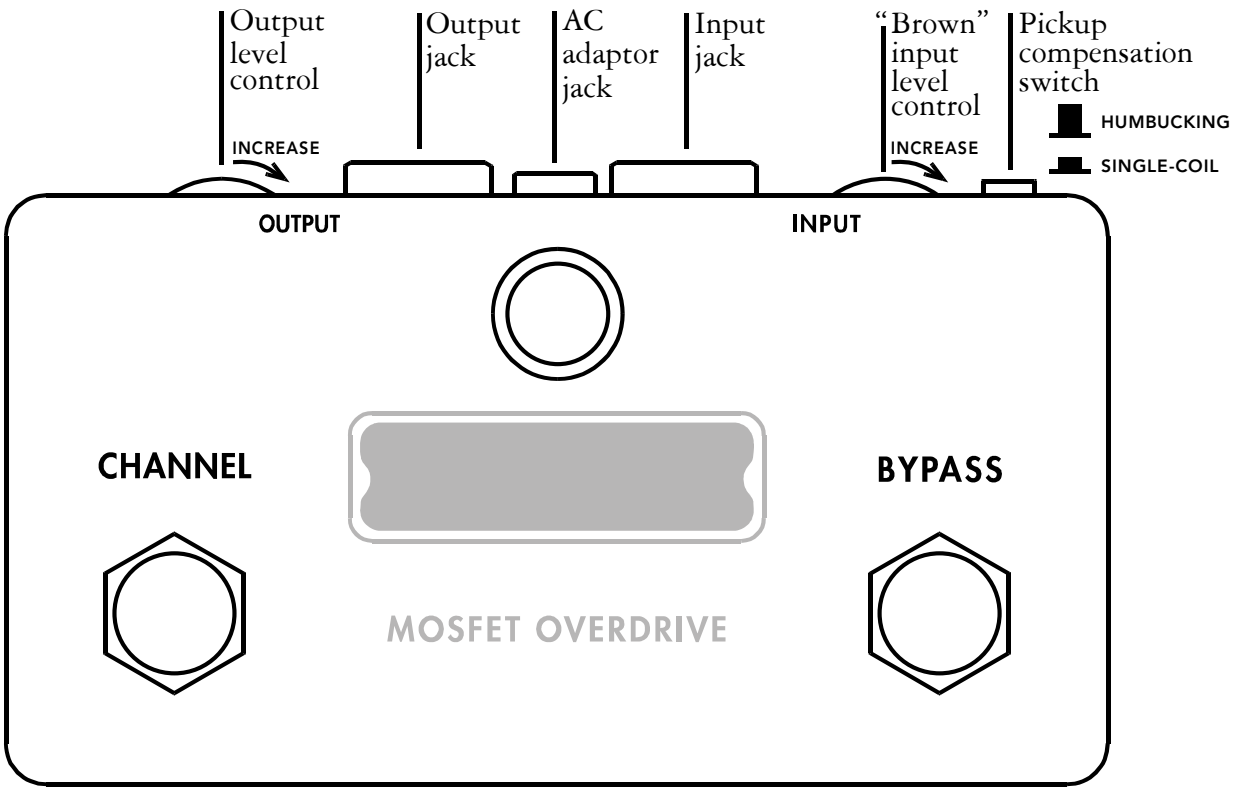
Operation

The Blackstone Mosfet Overdrive 2s allows footswitch selection of 2 different overdrive sounds. The pilot light changes color when you toggle between these two sounds with the "CHANNEL" switch. The "Red" channel is the flat out overdrive sound. The "Brown" channel is controlled by the Input Level thumbwheel, which automatically compensates output level as the drive level is changed. The Output Level thumbwheel effects both channels.

The Pickup Compensation switch fattens the sound for use with vintage Fender-type single-coil pickups, and thins it for use with humbucking pickups. The difference is most noticeable at higher input level settings. It's possible that players who like a bottom-heavy sound may prefer the single-coil setting for all pickup types. It is less likely that the humbucker setting will be useful with Strat or Tele pickups, unless they are overwound "hot" models.

Placement

The Mosfet Overdrive 2s is designed to interact with the pickups on your guitar. Connecting a device that does not have "true" bypass between the Blackstone and the guitar significantly alters the tone, and will compromise the dynamic response and the ability to control the distortion with the guitar's volume control. The Blackstone has true bypass, so devices connected after it can see the inductance and impedance of the guitar pickups when the Blackstone is not in use.



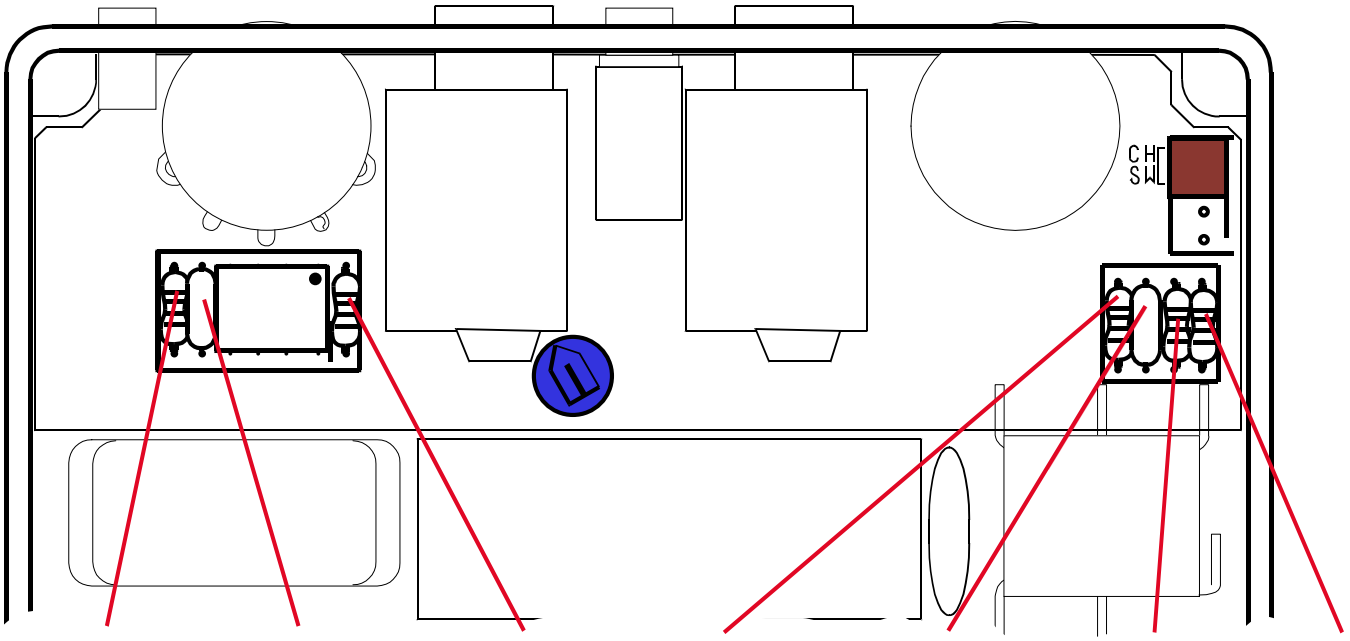
Internal adjustments

The overall drive level, for both channels, may be adjusted with the small blue trimmer control inside the unit. This is not meant to be operated at its maximum (clockwise) setting. If it's not backed off slightly, there may be oscillations. The default setting is 50%. The control can be turned with a guitar pick.

The function of the "CHANNEL" switch may be changed into that of a "Solo" switch, so that the amount of distortion for both channels is set by the external thumbwheel, but the Red channel is louder. This is done by moving the brown 2-wire connector found at the right-hand end of the circuit board from the two pins labeled "CH SW" to the two lower pins. The connector MUST NEVER straddle the second and third pins.

More advanced internal modifications

Seven key components (resistors and capacitors) are mounted in sockets, allowing modifications to the unit without soldering or disassembly. Players who don't feel confident about working on their own equipment may opt to have such mods performed by a technician. Good lighting and dexterity (or patience) with small objects are the primary requirements.



Socket-mounted Resistor 1
Attenuates output at all frequencies except bass.
Default: 7.5K

Socket-mounted Capacitor 1
For tuning single-coil pickup compensation.
Default: 0.05μF

Socket-mounted Resistor 2
Lower value increases treble at drive stage.
Default: 100K

Socket-mounted Resistor 3
Higher value provides extra distortion.
Default: 750K

Socket-mounted Capacitor 2
Restricts output presence.
Smaller value = brighter.
Default: 330pF

Socket-mounted Resistor 4
Sets boost when "Channel" switch is re-configured as Solo switch.
Smaller value = more boost.
Default: 82K

Socket-mounted Resistor 5
Controls compensation of level as "brown" channel drive is increased.
Default: 6.2K

Components inserted in the sockets must have pins less than 0.023" in diameter. Half-watt resistors are too big, and attempting to insert them will damage the socket. Leads should be formed in the same manner as the component being replaced.

Power Adaptor

The Mosfet Overdrive may be powered by a 9VDC adaptor. The connector must be an 1/8" (3.5mm) phone plug, with the tip positive. Most supplies intended to power guitar pedals work well, but cheap unregulated adaptors may impose a hum. Current consumption is approximately 18mA. Do not run the Mosfet Overdrive with a power supply of more than 9.5 volts.